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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/720,244

11/25/2003

Naohiro Takeshita

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EXAMINER

WALKER, KEITH D

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

04/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/720,244	TAKESHITA ET AL.	
	Examiner	Art Unit	
	KEITH WALKER	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/4/08, 12/19/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-13 and 15-20 are pending. Claims 15-20 are withdrawn as being directed toward a nonelected invention and claims 1-13 are pending examination as discussed below.

This action is final since the all the claims presented in the application after the entry of the submission are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and would have been properly finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to the filing of the RCE under 37 CFR 1.114. (MPEP 706.07(b)).

Claim Rejections - 35 USC § 112

The rejections under 35 USC 112 1st and 2nd paragraph have been withdrawn due to the amendments.

Information Disclosure Statement

The information disclosure statements filed on 12/19/07 & 1/4/08 have been placed in the application file and the information referred to therein has been considered as to the merits.

The Japanese references listed on the 1/4/08 information disclosure statement were crossed out and not considered since a translation was not presented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamada et al., JP 2001-357869.

Hamada teaches a solid high polymer type fuel cell stack in which performance of unit cells at the two ends of the stack are prevented from dropping. The fuel cell stack is structured such that a plurality of unit cells are laid one over another according to one of the following: 1) the water repellency of the cathode gas diffusion layer of each unit cell located at the stack ends is made lower than that of the unit cells located elsewhere in the stack; 2) the gas permeability of the cathode gas diffusion layer of each unit cell located at the ends is made higher than that of the unit cells located elsewhere in the stack; 3) the specific surface area of the carbon material of the mixture layer in the cathode of each unit cell located at the ends is made greater than that of the unit cells located elsewhere in the stack; and, 4) the pressure loss in the cathode side gas passage of each unit cell located at the ends is made smaller than that of the unit cells located elsewhere in the stack (abstract). The depth of a separator of a cell unit located at an end of the stack is increased by 10% compared with a gas passageway of a single cell located in other parts of the stack (0031). Reactant gas is supplied from the clamping plates located at both ends of the stack (0013). Thus the claims are anticipated.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai, JP 63-119166.

Sakai teaches a fuel cell stack wherein the reliability and performance of the fuel cell is improved by increasing a cross-sectional area of the fuel gas flow passage in a unit cell located at a lower part of a layered stack. See the Figures. Thus the claims are anticipated.

Response to Arguments

Applicant's arguments filed 1/4/08 have been fully considered but they are not persuasive.

Applicant argues neither Hamada nor Sakai disclose a separator having a plurality or ribs that are provided between the grooves, wherein a pitch between the ribs of one cell block is different from a pitch between the ribs of another cell block. As admitted in applicant's arguments of 3/5/07, applicant asserts Hamada discloses that the cell units located in the ends of the fuel stack may have grooves of a gas passage of a separator which are deeper than cell units located elsewhere on the fuel stack. Therefore, since both the prior art teaches different pitches between ribs of different cell blocks and applicant admits the same, the instant claims are anticipated by the prior art of Hamada and Sakai as discussed above.

Furthermore, Hamada teaches a solid high polymer type fuel cell stack in which performance of unit cells at the two ends of the stack are prevented from dropping. The

depth of a separator of a cell unit located at an end of the stack is increased by 10% compared with a gas passageway of a single cell located in other parts of the stack (0031). See Figure 1 of Hamada for a showing of the ribs and the gas passages between.

Furthermore, Sakai teaches a fuel cell stack wherein the reliability and performance of the fuel cell is improved by increasing a cross-sectional area of the fuel gas flow passage in a unit cell located at a lower part of a layered stack. See figures 1, 2 & 4 for a showing of the ribs and the gas passages between. Therefore, Sakai does teach the cross-sectional area of the gas passage is increased.

Conclusion

This is a continuation of applicant's Application No. 10/720244. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH WALKER whose telephone number is (571)272-3458. The examiner can normally be reached on Mon. - Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

K. Walker

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795